DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed May 28, 2004, fails to comply with 37 CFR 1.98(a)(2), which requires a *legible* copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

2. Examiner has found the following non-patent literature references needing Applicant's attention:

- I. CHIH-LIN and R.D. GITLIN, "A profile-based location strategy and its performance." Examiner noticed R.D. Gitlin is not an author of the article, but Gregory P. Pollini is. Examiner believes this is a typographical error, but IDS should get updated to reflect Pollini as the author of the article.
- C.L. WEBER, G.K. HUTH, and D.H. BATSON, "Performance Considerations of Code Division Multiple Access Systems." Examiner found text "smeared" on Page 8 along the left side of the sheet making the information unpresentable.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- Paragraph 0026 discloses Figure 5 having reference numbers 500, 502, 504, and 506. None of these numbers are disclosed in Figure 5;

- Paragraph 0027 discloses Figure 6 having reference numbers 600, 602, 604, 606, 608, and 610. None of these numbers are disclosed in Figure 6;
- Paragraph 0062 discloses Figure 13 having reference numbers 1300, 1302, and 1304. None of these numbers are disclosed in Figure 13; and
- Paragraph 0063 discloses Figure 14 having the reference numbers 1400, 1402, 1404, 1406, 1408, and 1410. None of these numbers are disclosed in Figure 14.

4. The drawings are objected to because Figure 6, third block down discloses the phrase, "Encode the one or more sets of of parallel symbols." Examiner believes use of the second "of" is a typographical error.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities:

- Paragraph 0024 with reference to Figure 3, discloses *receive bits 0-5 (322-334)* and *transmit bits 0-5 (302-314)*. This goes contrary to Figure 3, which represents *receive bits 0-6 (322-334)* and *transmit bits 0-6 (302-314)*. Examiner recommends amending

specification to correct Paragraph 0024 to reflect *receive bits 0-6 (322-334)* and *transmit bits 0-6 (302-314)* to match the corresponding information as disclosed by Figure 3;

- Paragraph 0028 discloses the phrase in Lines 1-2, "transmitter 700 *is* accordance with one embodiment." Examiner believes a typographical error exists with using the word *is* in the above statement and recommends changing the word *is* to the word *in*; and
- Paragraph 0029 discloses the phrase in Lines 1-2, "transmitter 800 *is* accordance with one embodiment." Examiner believes a typographical error exists with using the word *is* in the above statement and recommends changing the word *is* to the word *in*.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 7, 23, 43, 59, and 75 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 7 recites the limitation "the channel symbols" in line 2. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 23 recites the limitation "the channel symbols" in line 2. There is insufficient antecedent basis for this limitation in the claim.

11. Claim43 recites the limitation "the channel symbols" in line 2. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 59 recites the limitation "the channel symbols" in line 2. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 75 recites the limitation "the channel symbols" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

14. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15. Claims 32-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 32-38 lack the proper form for a claim directed to computer/machine readable instructions. To be statutory claims directed to computer/machine readable instructions must be embodied on a computer readable medium encoded with a process or data structure usable by a computer. A computer program product storing instructions for execution on a computer system is not acceptable. For the claim to be statutory the preamble of the claim must define a structural and functional interrelationship between the process or data structure and computer software and hardware components. As a result, the preamble of the claim must define a process or data structure as a computer readable medium embodying the process or data structure.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claims 1-4, 10, 16-20, 26, 32-40, 46, 52-56, 62, 68-72, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahito Murakami (US 5,761,209) in view of Howard Thomas Olnowich (US 5,774,698).

19. Murakami discloses a method for transmitting information (Column 1, Lines 7-14 discloses transmitting digital signals) over a transmission medium (Column 1, Lines 7-14 discloses along a transmission path), the method comprising the steps of:

receiving a set of serial symbols (Column 1, Lines 44-54 discloses a single series of component serial digital signals, which have been inputted through an inlet terminal) representing the information to be transmitted (Column 4, Lines 44-54 discloses two series of composite serial digital signals converted from a single series of component signals for output to communication path) during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data);

the set of serial symbols into one or more sets (Column 4, Lines 44-54 discloses converting a single series of component signals into two series of composite serial digital signals for output to communication path); and

during the frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data).

20. Murakami does not expressly disclose encoding; of parallel channel symbols; and transmitting the one or more sets of parallel channel symbols.

21. Olnowich discloses in the same field of endeavor encoding (Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder); of parallel channel symbols (Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder); and transmitting the one or more sets of parallel channel symbols (Column 50, Lines 30-64 discloses transmitting the converted parallel data).

22. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

23. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the method disclosed by Murakami and add to it the features as disclosed above by Olnowich to create a method for transmitting information over a transmission medium improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

24. As for Claim 2, Murakami in view of Olnowich disclose the step of receiving a set of serial symbols (Murakami, Column 1, Lines 44-54 discloses a single series of component serial digital signals, which have been inputted through an inlet terminal) representing the information to be transmitted (Murakami, Column 4, Lines 44-54 discloses two series of composite serial

digital signals converted from a single series of component signals for output to communication path) during a frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data) comprises the steps of:

receiving a set of serial bits (Murakami, Column 4, Lines 44-54 discloses component serial digital signals, which have been inputted through an inlet terminal); and

encoding (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder) the set of serial bits (Murakami, Column 4, Lines 44-54 discloses component serial digital signals) into a set of serial symbols representing the information to be transmitted (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals converted from a single series of component signals for output to communication path) during a frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data).

25. As for Claim 3, Murakami in view of Olnowich disclose the step of encoding (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder) the set of serial symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals) into one or more sets of parallel channel symbols (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder) comprises the steps of:

converting the set of serial symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals) into one or more sets of parallel symbols (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data); and

encoding the one or more sets of parallel symbols (Olnowich, Column 50, Lines 30-64 discloses transmitting the converted parallel data) into a transmission channel (Murakami, Column 1, Lines 7-14 discloses along a transmission path).

26. As for Claim 4, Murakami in view of Olnowich disclose each symbol is a bit (Murakami, Column 3, Line 64 – Column 4, Line 19 discloses signals produced by bit-by-bit synthesis; an individual with ordinary skill in the art would recognize a signal would comprise a bit).

27. As for Claim 10, Murakami in view of Olnowich disclose the transmission medium is a wireless network (Murakami, Column 8, Lines 24-33 discloses the transmission path may include a wireless transmission path).

28. As for Claim 16, Murakami discloses a method for receiving information (Column 7, Lines 28-40 discloses two series of composite serial digital signals being supplied to a time division demultiplexer of a receiver unit from the transmitter; an individual with ordinary skill in the art would recognize this action as information being received) over a transmission medium (Column 1, Lines 7-14 discloses along a transmission path), the method comprising the steps of:

receiving (Column 7, Lines 28-40 discloses signals being supplied to a time division demultiplexer of a receiver unit from the transmitter; an individual with ordinary skill in the art would recognize this action as information being received); during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data); and

into a set of serial symbols (Column 8, Lines 4-12 discloses restoring the component serial digital signals) representing the information transmitted (Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals).

29. Murakami does not expressly disclose a set of parallel channel symbols; and decoding the set of parallel channel symbols.

30. Olnowich discloses in the same field of endeavor a set of parallel channel symbols (Column 54, Lines 6-67 discloses data in the network parallel data format); and decoding (Column 54, Lines 6-67 discloses a decode link command block using data to generate bytes as controlled by timing signals) the set of parallel channel symbols (Column 54, Lines 6-67 discloses data in the network parallel data format).

31. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

32. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the method disclosed by Murakami and add to it the features as disclosed above by Olnowich to create a method for receiving information over a transmission medium improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

33. As for Claim 17, Murakami in view of Olnowich disclose the step of decoding (Olnowich, Column 54, Lines 6-67 discloses a decode link command block using data to generate bytes as controlled by timing signals) the set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) into a set of serial symbols (Murakami, Column 8, Lines 4-12 discloses restoring the component serial digital signals) representing the information transmitted (Murakami, Column 4, Lines 55-59 discloses a

receiver returns the transmitted signals to the single series of component serial digital signals) comprises the steps of:

(a) observing the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) over an interval of the frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data);

(b) decoding (Olnowich, Column 54, Lines 6-67 discloses a decode link command block using data to generate bytes as controlled by timing signals) the set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) into a set of serial symbols (Murakami, Column 8, Lines 4-12 discloses restoring the component serial digital signals) representing the information transmitted (Murakami, Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals);

(c) determining whether the information transmitted was received correctly (Olnowich, Column 23, Line 46 – Column 24, Line 6 discloses checking the received message for accuracy); and

(d) observing the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) over another interval of the frame and repeating steps (b) and (c) whenever the information transmitted was not received correctly (Olnowich, Column 24, Lines 7-26 discloses retrying the transmission in response to the receiver issuing a reject signal).

34. As for Claim 18, Murakami in view of Olnowich disclose the step of notifying the transmitter that the information transmitted was received correctly whenever the information transmitted was received correctly (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal to the sender confirming the correct arrival of a message).

35. As for Claim 19, Murakami in view of Olnowich disclose the step of sleeping until the next frame whenever the information transmitted was received correctly (Olnowich, Column 47, Lines 1-22 disclose detection of the receiver byte and activates block from its previously IDLE state).

36. As for Claim 20, Murakami in view of Olnowich disclose each symbol is a bit (Murakami, Column 3, Line 64 – Column 4, Line 19 discloses signals produced by bit-by-bit synthesis; an individual with ordinary skill in the art would recognize a signal would comprise a bit).

37. As for Claim 26, Murakami in view of Olnowich disclose the transmission medium is a wireless network (Murakami, Column 8, Lines 24-33 discloses the transmission path may include a wireless transmission path).

38. As for Claim 32, Murakami discloses for transmitting information (Column 1, Lines 7-14 discloses transmitting digital signals) over a transmission medium (Column 1, Lines 7-14 discloses along a transmission path) comprising:

receiving a set of serial symbols (Column 1, Lines 44-54 discloses a single series of component serial digital signals, which have been inputted through an inlet terminal) representing the information to be transmitted (Column 4, Lines 44-54 discloses two series of composite serial digital signals converted from a single series of component signals for output to

communication path) during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data);

the set of serial symbols into one or more sets (Column 4, Lines 44-54 discloses converting a single series of component signals into two series of composite serial digital signals for output to communication path); and

during the frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data).

39. Murakami does not expressly disclose a computer program embodied on a computer readable medium; a code segment for; a code segment for encoding; of parallel channel symbols; and a code segment for transmitting the one or more sets of parallel channel symbols.

40. Olnowich discloses in the same field of endeavor a computer program embodied on a computer readable medium (Column 61, Lines 29-49 discloses a program written on a computer); a code segment for (Column 61, Lines 29-49 discloses a program written); a code segment for (Column 61, Lines 29-49 discloses a program written) encoding (Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder); of parallel channel symbols (Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder); and a code segment for (Column 61, Lines 29-49 discloses a program written) transmitting the one or more sets of parallel channel symbols (Column 50, Lines 30-64 discloses transmitting the converted parallel data).

41. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the features disclosed by Murakami and add to it the computer program embodied on a computer readable medium and features as disclosed above by Olnowich to create a computer program embodied on a computer readable medium for transmitting information over a transmission medium improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

43. As for Claim 33, Murakami in view of Olnowich disclose the code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) receiving a set of serial symbols (Murakami, Column 1, Lines 44-54 discloses a single series of component serial digital signals, which have been inputted through an inlet terminal) representing the information to be transmitted (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals converted from a single series of component signals for output to communication path) during a frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data) comprises:

a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) receiving a set of serial bits (Murakami, Column 4, Lines 44-54 discloses component serial digital signals, which have been inputted through an inlet terminal); and

a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) encoding (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder) the set of serial bits (Murakami, Column 4, Lines 44-54 discloses component serial digital signals) into a set of serial symbols representing the information to be transmitted

(Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals converted from a single series of component signals for output to communication path) during the frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data).

44. As for Claim 34, Murakami in view of Olnowich disclose the code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) encoding (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder) the set of serial symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals) into one or more sets of parallel channel symbols (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder) comprises:

a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) converting the set of serial symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals) into one or more sets of parallel symbols (Olnowich, Column 50, Lines 30-64 discloses converting serial bit stream to parallel data); and

a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) encoding the one or more sets of parallel symbols (Olnowich, Column 50, Lines 30-64 discloses transmitting the converted parallel data) into a transmission channel (Murakami, Column 1, Lines 7-14 discloses along a transmission path).

45. As for Claim 35, Murakami discloses for receiving information (Column 7, Lines 28-40 discloses two series of composite serial digital signals being supplied to a time division demultiplexer of a receiver unit from the transmitter; an individual with ordinary skill in the art

would recognize this action as information being received) over a transmission medium (Column 1, Lines 7-14 discloses along a transmission path) comprising:

receiving (Column 7, Lines 28-40 discloses signals being supplied to a time division demultiplexer of a receiver unit from the transmitter; an individual with ordinary skill in the art would recognize this action as information being received); during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data); and

into a set of serial symbols (Column 8, Lines 4-12 discloses restoring the component serial digital signals) representing the information transmitted (Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals).

46. Murakami does not expressly disclose a computer program embodied on a computer readable medium; a code segment for; a set of parallel channel symbols; and a code segment for decoding the set of parallel channel symbols.

47. Olnowich discloses in the same field of endeavor a computer program embodied on a computer readable medium (Column 61, Lines 29-49 discloses a program written on a computer); a code segment for (Column 61, Lines 29-49 discloses a program written); a set of parallel channel symbols (Column 54, Lines 6-67 discloses data in the network parallel data format); and a code segment for (Column 61, Lines 29-49 discloses a program written) decoding (Column 54, Lines 6-67 discloses a decode link command block using data to generate bytes as controlled by timing signals) the set of parallel channel symbols (Column 54, Lines 6-67 discloses data in the network parallel data format).

48. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

49. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the features disclosed by Murakami and add to it the computer program embodied on a computer readable medium and features as disclosed above by computer program embodied on a computer readable medium to create a method for receiving information over a transmission medium improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

50. As for Claim 36, Murakami in view of Olnowich disclose the code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) decoding (Olnowich, Column 54, Lines 6-67 discloses a decode link command block using data to generate bytes as controlled by timing signals) the set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) into a set of serial symbols (Murakami, Column 8, Lines 4-12 discloses restoring the component serial digital signals) representing the information transmitted (Murakami, Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals) comprises:

(a) a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) observing the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) over an interval of the frame (Murakami, Column 7, Lines 17-26 discloses

parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data);

(b) a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) decoding (Olnowich, Column 54, Lines 6-67 discloses a decode link command block using data to generate bytes as controlled by timing signals) the set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) into a set of serial symbols (Murakami, Column 8, Lines 4-12 discloses restoring the component serial digital signals) representing the information transmitted (Murakami, Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals);

(c) a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) determining whether the information transmitted was received correctly (Olnowich, Column 23, Line 46 – Column 24, Line 6 discloses checking the received message for accuracy); and

(d) a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) observing the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) set of parallel channel symbols (Olnowich, Column 54, Lines 6-67 discloses data in the network parallel data format) over another interval of the frame and repeating code segments (b) and (c) whenever the information transmitted was not received correctly (Olnowich, Column 24, Lines 7-26 discloses retrying the transmission in response to the receiver issuing a reject signal).

51. As for Claim 37, Murakami in view of Olnowich disclose a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) notifying the transmitter that the information transmitted was received correctly whenever the information transmitted was

received correctly (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal to the sender confirming the correct arrival of a message).

52. As for Claim 38, Murakami in view of Olnowich disclose a code segment for (Olnowich, Column 61, Lines 29-49 discloses a program written) sleeping until the next frame whenever the information transmitted was received correctly (Olnowich, Column 47, Lines 1-22 disclose detection of the receiver byte and activates block from its previously IDLE state).

53. As for Claim 39, Murakami discloses an apparatus (Abstract discloses a transmitter) for transmitting information (Column 1, Lines 7-14 discloses transmitting digital signals) over a transmission medium (Column 1, Lines 7-14 discloses along a transmission path) comprising:

an encoder that produces a set of serial symbols (Column 5, Lines 55-65 discloses an encoder producing serial digital signals) representing the information to be transmitted (Column 4, Lines 55-65 discloses two series of composite serial digital signals converted from a single series of component signals for output to communication path) during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data);

communicably coupled to the encoder (Column 5, Lines 55-65 discloses an encoder following a circuit that works with parallel and serial signals);

a modulator communicably coupled (Column 4, Lines 44-54 discloses a time division multiplexer receiving data for transmission, which an individual with ordinary skill in the art would recognize as being coupled to another device); and

one or more antennas (Column 8, Lines 24-33 discloses transmission path includes a wireless transmission path; an individual with ordinary skill in the art would recognize at least

one antenna would be needed for wireless communication) communicably coupled to the modulator (Column 4, Lines 44-54 discloses transmission path proceeds after a time division multiplexer).

54. Murakami does not expressly disclose a serial to parallel symbol converter; and to the serial to parallel symbol converter.

55. Olnowich discloses in the same field of endeavor a serial to parallel symbol converter (Column 7, Lines 50-63 discloses a multi-media serial line switching adapter that converts serial data into parallel data); and to the serial to parallel symbol converter (Column 7, Lines 50-63 discloses a multi-media serial line switching adapter that converts serial data into parallel data).

56. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

57. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the apparatus disclosed by Murakami and add to it the features as disclosed above by Olnowich to create an apparatus for transmitting information over a transmission medium improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

58. As for Claim 40, Murakami in view of Olnowich disclose wherein each symbol is a bit (Murakami, Column 3, Line 64 – Column 4, Line 19 discloses signals produced by bit-by-bit synthesis; an individual with ordinary skill in the art would recognize a signal would comprise a bit).

59. As for Claim 46, Murakami in view of Olnowich disclose the transmission medium is a wireless network (Murakami, Column 8, Lines 24-33 discloses the transmission path may include a wireless transmission path).

60. As for Claim 52, Murakami discloses an apparatus (Abstract discloses a receiver) for receiving information (Column 7, Lines 28-40 discloses two series of composite serial digital signals being supplied to a time division demultiplexer of a receiver unit from the transmitter; an individual with ordinary skill in the art would recognize this action as information being received) over a transmission medium (Column 1, Lines 7-14 discloses along a transmission path) comprising:

one or more antennas (Column 8, Lines 24-33 discloses transmission path includes a wireless transmission path; an individual with ordinary skill in the art would recognize at least one antenna would be needed for wireless communication);

a demodulator communicably coupled (Column 7, Lines 28-40 discloses a time division demultiplexer receiving data from transmission path, which an individual with ordinary skill in the art would recognize as being coupled to a wireless interface) to the one or more antennas (Column 8, Lines 24-33 discloses transmission path includes a wireless transmission path; an individual with ordinary skill in the art would recognize at least one antenna would be needed for wireless communication);

communicably coupled to the demodulator (Figure 1 discloses time division demultiplexer being interfaced with a switching circuit 65); and

a decoder communicably coupled (Column 5, Line 66 – Column 6, Line 15 discloses a decoder decodes the inputted composite signals; Column 7, Lines 51-59 discloses information

passing between switching circuit 65 and the decoder); and representing the information transmitted (Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals) during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data).

61. Kurakami does not expressly disclose a parallel to serial symbol converter; and to the parallel to serial symbol converter to produce a set of serial bits.

62. Olnowich discloses in the same field of endeavor a parallel to serial symbol converter (Column 7, Lines 50-63 discloses a second multi-media serial line switching adapter that converts serial data into parallel data; an individual with ordinary skill in the art would recognize to modify the switching circuit 65 by Murakami to include the feature by Olnowich); and to the parallel to serial symbol converter (Column 7, Lines 50-63 discloses a second multi-media serial line switching adapter that converts serial data into parallel data; an individual with ordinary skill in the art would recognize to modify the switching circuit 65 by Murakami to include the feature by Olnowich) to produce a set of serial bits (Column 7, Lines 50-63 discloses converting the received message to a serial protocol).

63. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the apparatus disclosed by Murakami and add to it the features as disclosed above by Olnowich to create an apparatus for receiving information over a

transmission medium improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

65. As for Claim 53, Murakami in view of Olnowich disclose the decoder (Murakami, Column 5, Line 66 – Column 6, Line 15 discloses a decoder decodes the inputted composite signals)

(a) observes the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) serial symbols (Olnowich, Column 7, Lines 50-63 discloses serial protocol) over an interval of the frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data),

(b) decodes the serial symbols into a set of serial bits representing the information transmitted (Murakami, Column 5, Line 66 – Column 6, Line 15 discloses a decoder decodes the inputted composite signals),

(c) determines whether the information transmitted was received correctly (Olnowich, Column 23, Line 46 – Column 24, Line 6 discloses checking the received message for accuracy), and observes the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) serial symbols (Olnowich, Column 7, Lines 50-63 discloses serial protocol) over another interval of the frame and repeats steps (b) and (c) whenever the information transmitted was not received correctly (Olnowich, Column 24, Lines 7-26 discloses retrying the transmission in response to the receiver issuing a reject signal).

66. As for Claim 54, Murakami in view of Olnowich disclose notifies the transmitter that the information transmitted was received correctly whenever the information transmitted was

received correctly (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal to the sender confirming the correct arrival of a message).

67. As for Claim 55, Murakami in view of Olnowich disclose sleeps until the next frame whenever the information transmitted was received correctly (Olnowich, Column 47, Lines 1-22 disclose detection of the receiver byte and activates block from its previously IDLE state).

68. As for Claim 56, Murakami in view of Olnowich disclose each symbol is a bit (Murakami, Column 3, Line 64 – Column 4, Line 19 discloses signals produced by bit-by-bit synthesis; an individual with ordinary skill in the art would recognize a signal would comprise a bit).

69. As for Claim 62, Murakami in view of Olnowich disclose the transmission medium is a wireless network (Murakami, Column 8, Lines 24-33 discloses the transmission path may include a wireless transmission path).

70. As for Claim 68, Murakami discloses a system (Abstract discloses passing information between a transmitter and a receiver which an individual with ordinary skill in the art would recognize as a system) for transmitting (Column 1, Lines 7-14 discloses along a transmission path) and receiving information (Column 7, Lines 28-40 discloses two series of composite serial digital signals being supplied to a time division demultiplexer of a receiver unit from the transmitter; an individual with ordinary skill in the art would recognize this action as information being received) comprising:

a transmitter (Abstract discloses a transmitter);

a receiver (Abstract discloses a receiver);

a transmission medium communicably coupling the transmitter and the receiver (Column 1, Lines 16-24);

the transmitter (Abstract discloses a transmitter) comprising; from a set of serial symbols (Column 1, Lines 44-54 discloses a single series of component serial digital signals, which have been inputted through an inlet terminal) representing the information to be transmitted (Column 4, Lines 44-54 discloses two series of composite serial digital signals converted from a single series of component signals for output to communication path) during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data); communicably coupled to the encoder (Column 5, Lines 55-65 discloses an encoder following a circuit that works with parallel and serial signals), a modulator communicably coupled (Column 4, Lines 44-54 discloses a time division multiplexer receiving data for transmission, which an individual with ordinary skill in the art would recognize as being coupled to another device); and one or more antennas (Column 8, Lines 24-33 discloses transmission path includes a wireless transmission path; an individual with ordinary skill in the art would recognize at least one antenna would be needed for wireless communication) communicably coupled to the modulator (Column 4, Lines 44-54 discloses transmission path proceeds after a time division multiplexer); and

the receiver (Abstract discloses a receiver) comprising one or more antennas (Column 8, Lines 24-33 discloses transmission path includes a wireless transmission path; an individual with ordinary skill in the art would recognize at least one antenna would be needed for wireless communication), a demodulator communicably coupled (Column 7, Lines 28-40 discloses a time division demultiplexer receiving data from transmission path, which an individual with ordinary

skill in the art would recognize as being coupled to a wireless interface) to the one or more antennas (Column 8, Lines 24-33 discloses transmission path includes a wireless transmission path; an individual with ordinary skill in the art would recognize at least one antenna would be needed for wireless communication); communicably coupled to the demodulator (Figure 1 discloses time division demultiplexer being interfaced with a switching circuit 65) and a decoder communicably coupled (Column 5, Line 66 – Column 6, Line 15 discloses a decoder decodes the inputted composite signals; Column 7, Lines 51-59 discloses information passing between switching circuit 65 and the decoder); and representing the information transmitted (Column 4, Lines 55-59 discloses a receiver returns the transmitted signals to the single series of component serial digital signals) during a frame (Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data).

71. Kurakami does not expressly disclose an encoder that produces one or more sets of parallel channel symbols; a serial to parallel symbol converter; to the serial to parallel symbol converter; a parallel to serial symbol converter; and to the parallel to serial symbol converter to produce a set of serial bits.

72. Olnowich discloses in the same field of endeavor an encoder (Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder; an individual with ordinary skill in the art would recognize to modify the encoder by Murakami with the feature disclosed by Olnowich) that produces one or more sets of parallel channel symbols (Column 50, Lines 30-64 discloses converting serial bit stream to parallel data by encoder); a serial to parallel symbol converter (Column 7, Lines 50-63 discloses a multi-media serial line switching adapter that converts serial data into parallel data); to the serial to parallel symbol converter (Column 7, Lines

50-63 discloses a multi-media serial line switching adapter that converts serial data into parallel data); a parallel to serial symbol converter (Column 7, Lines 50-63 discloses a second multi-media serial line switching adapter that converts serial data into parallel data; an individual with ordinary skill in the art would recognize to modify the switching circuit 65 by Murakami to include the feature by Olnowich); and to the parallel to serial symbol converter (Column 7, Lines 50-63 discloses a second multi-media serial line switching adapter that converts serial data into parallel data; an individual with ordinary skill in the art would recognize to modify the switching circuit 65 by Murakami to include the feature by Olnowich) to produce a set of serial bits (Column 7, Lines 50-63 discloses converting the received message to a serial protocol).

73. Olnowich discloses this difference for the purpose of improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface (Column 2, Lines 13-29).

74. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the system disclosed by Murakami and add to it the features as disclosed above by Olnowich to create a system for transmitting and receiving information improving adaptation of serial fiber or copper wire and wireless transmission media to parallel switching networks for the purpose of interconnecting large numbers of processors with a minimal interface.

75. As for Claim 69, Murakami in view of Olnowich disclose the decoder (Murakami, Column 5, Line 66 – Column 6, Line 15 discloses a decoder decodes the inputted composite signals)

(a) observes the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) serial symbols (Olnowich, Column 7, Lines 50-63 discloses serial protocol) over an interval of the frame (Murakami, Column 7, Lines 17-26 discloses parallel signals include frame patterns which facilitate detection of timings for inserting/deleting data),

(b) decodes the serial symbols into a set of serial bits representing the information transmitted (Murakami, Column 5, Line 66 – Column 6, Line 15 discloses a decoder decodes the inputted composite signals),

(c) determines whether the information transmitted was received correctly (Olnowich, Column 23, Line 46 – Column 24, Line 6 discloses checking the received message for accuracy), and observes the received (Olnowich, Column 32, Lines 5-27 discloses examining the arriving bits) serial symbols (Olnowich, Column 7, Lines 50-63 discloses serial protocol) over another interval of the frame and repeats steps (b) and (c) whenever the information transmitted was not received correctly (Olnowich, Column 24, Lines 7-26 discloses retrying the transmission in response to the receiver issuing a reject signal).

76. As for Claim 70, Murakami in view of Olnowich disclose the receiver notifies the transmitter that the information transmitted was received correctly whenever the information transmitted was received correctly (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal to the sender confirming the correct arrival of a message).

77. As for Claim 71, Murakami in view of Olnowich disclose the receiver sleeps until the next frame whenever the information transmitted was received correctly (Olnowich, Column 47, Lines 1-22 disclose detection of the receiver byte and activates block from its previously IDLE state).

78. As for Claim 72, Murakami in view of Olnowich disclose each symbol is a bit (Murakami, Column 3, Line 64 – Column 4, Line 19 discloses signals produced by bit-by-bit synthesis; an individual with ordinary skill in the art would recognize a signal would comprise a bit).

79. As for Claim 78, Murakami in view of Olnowich disclose the transmission medium is a wireless network (Murakami, Column 8, Lines 24-33 discloses the transmission path may include a wireless transmission path).

80. Claims 5-8, 21-24, 41-44, 57-60, and 73-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahito Murakami (US 5,761,209) in view of Howard Thomas Olnowich (US 5,774,698) and further in view of Treadaway et al (US 6,480,477).

81. As for Claim 5, Murakami in view of Olnowich disclose depends (Murakami, Column 2, Lines 1-17 discloses a requirement of transmission to a system clock).

82. Murakami in view of Olnowich do not expressly disclose the length of the frame; and on a transmission time.

83. Treadaway discloses in the same field of endeavor the length of the frame (Column 14, Lines 27-43 discloses frames having a length); and on a transmission time (Column 14, Lines 27-43 discloses frames to meet the timing requirements needed for transmission).

84. Treadaway discloses this difference for the purpose of providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks (Column 2, Lines 23-25).

85. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Murakami and Olnowich and

add to it the feature as disclosed above by Treadaway to create a method for transmitting information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

86. As for Claim 6, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is variable (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length).

87. As for Claim 7, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on successful receipt (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses transmission was received correctly) of the channel symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals for output to communication path).

88. As for Claim 8, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on feedback from a receiver (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal confirming the correct arrival of a message).

89. As for Claim 21, Murakami in view of Olnowich disclose depends (Murakami, Column 2, Lines 1-17 discloses a requirement of transmission to a system clock).

90. Murakami in view of Olnowich do not expressly disclose the length of the frame; and on a transmission time.

91. Treadaway discloses in the same field of endeavor the length of the frame (Column 14, Lines 27-43 discloses frames having a length); and on a transmission time (Column 14, Lines 27-43 discloses frames to meet the timing requirements needed for transmission).

92. Treadaway discloses this difference for the purpose of providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks (Column 2, Lines 23-25).

93. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Murakami and Olnowich and add to it the feature as disclosed above by Treadaway to create a method for receiving information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

94. As for Claim 22, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is variable (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length).

95. As for Claim 23, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on successful receipt (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses transmission was received correctly) of the channel symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals for output to communication path).

96. As for Claim 24, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a

variable length) on feedback from a receiver (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal confirming the correct arrival of a message).

97. As for Claim 41, Murakami in view of Olnowich disclose depends (Murakami, Column 2, Lines 1-17 discloses a requirement of transmission to a system clock).

98. Murakami in view of Olnowich do not expressly disclose the length of the frame; and on a transmission time.

99. Treadaway discloses in the same field of endeavor the length of the frame (Column 14, Lines 27-43 discloses frames having a length); and on a transmission time (Column 14, Lines 27-43 discloses frames to meet the timing requirements needed for transmission).

100. Treadaway discloses this difference for the purpose of providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks (Column 2, Lines 23-25).

101. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined apparatus of Murakami and Olnowich and add to it the feature as disclosed above by Treadaway to create an apparatus for transmitting information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

102. As for Claim 42, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is variable (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length).

103. As for Claim 43, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a

variable length) on successful receipt (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses transmission was received correctly) of the channel symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals for output to communication path).

104. As for Claim 44, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on feedback from a receiver (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal confirming the correct arrival of a message).

105. As for Claim 57, Murakami in view of Olnowich disclose depends (Murakami, Column 2, Lines 1-17 discloses a requirement of transmission to a system clock)

106. Murakami in view of Olnowich do not expressly disclose the length of the frame; and on a transmission time.

107. Treadaway discloses in the same field of endeavor the length of the frame (Column 14, Lines 27-43 discloses frames having a length); and on a transmission time (Column 14, Lines 27-43 discloses frames to meet the timing requirements needed for transmission).

108. Treadaway discloses this difference for the purpose of providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks (Column 2, Lines 23-25).

109. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined apparatus of Murakami and Olnowich and add to it the feature as disclosed above by Treadaway to create as apparatus for receiving

information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

110. As for Claim 58, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is variable (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length).

111. As for Claim 59, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on successful receipt (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses transmission was received correctly) of the channel symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals for output to communication path).

112. As for Claim 60, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on feedback from a receiver (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal confirming the correct arrival of a message).

113. As for Claim 73, Murakami in view of Olnowich disclose depends (Murakami, Column 2, Lines 1-17 discloses a requirement of transmission to a system clock)

114. Murakami in view of Olnowich do not expressly disclose the length of the frame; and on a transmission time.

115. Treadaway discloses in the same field of endeavor the length of the frame (Column 14, Lines 27-43 discloses frames having a length); and on a transmission time (Column 14, Lines 27-43 discloses frames to meet the timing requirements needed for transmission).

116. Treadaway discloses this difference for the purpose of providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks (Column 2, Lines 23-25).

117. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined system of Murakami and Olnowich and add to it the feature as disclosed above by Treadaway to create a system for transmitting and receiving information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

118. As for Claim 774, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is variable (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length).

119. As for Claim 75, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on successful receipt (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses transmission was received correctly) of the channel symbols (Murakami, Column 4, Lines 44-54 discloses two series of composite serial digital signals for output to communication path).

120. As for Claim 76, Murakami in view of Olnowich further in view of Treadaway disclose the length of the frame is based (Treadaway, Column 14, Lines 27-43 discloses frames having a variable length) on feedback from a receiver (Olnowich, Column 19, Line 65 – Column 20, Line 49 discloses pulsing an ACCEPT signal confirming the correct arrival of a message).

121. Claims 9, 11-15, 25, 27-31, 45, 47-51, 61, 63-67, 77, and 79-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahito Murakami (US 5,761,209) in view of Howard Thomas Olnowich (US 5,774,698) and further in view of William H. Gray (US 2004/0057408).

122. As for Claim 9, Murakami in view of Olnowich discloses the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path).

123. Murakami in view of Olnowich do not expressly disclose is a cellular network.

124. Gray discloses in the same field of endeavor is a cellular network (Paragraph 0003).

125. Gray discloses this difference for the purpose of enabling the WAN user to access and utilize the desired WLAN bandwidth from a high speed WLAN-based network to efficiently and quickly transmit, receive, upload or download files (Paragraph 0008).

126. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Murakami and Olnowich and add to it the feature as disclosed above by Gray to create a method for transmitting information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

127. As for Claim 11, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an ultra-wide bandwidth wireless network (Gray, Paragraph 0003 discloses a wireless telecommunications network).

128. As for Claim 12, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an indoor wireless network (Gray, Paragraph 0007 discloses wireless local area network, WLAN).

129. As for Claim 13, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a TDMA network (Gray, Paragraph 0026 discloses TDMA).

130. As for Claim 14, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a CDMA network (Gray, Paragraph 0026 discloses CDMA).

131. As for Claim 15, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a OFDM network (Gray, Paragraph 0019 discloses OFDM).

132. As for Claim 25, Murakami in view of Olnowich discloses the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path).

133. Murakami in view of Olnowich do not expressly disclose is a cellular network.

134. Gray discloses in the same field of endeavor is a cellular network (Paragraph 0003).

135. Gray discloses this difference for the purpose of enabling the WAN user to access and utilize the desired WLAN bandwidth from a high speed WLAN-based network to efficiently and quickly transmit, receive, upload or download files (Paragraph 0008).

136. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Murakami and Olnowich and add to it the feature as disclosed above by Gray to create a method for receiving information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

137. As for Claim 27, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an ultra-wide bandwidth wireless network (Gray, Paragraph 0003 discloses a wireless telecommunications network).

138. As for Claim 28, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an indoor wireless network (Gray, Paragraph 0007 discloses wireless local area network, WLAN).

139. As for Claim 29, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a TDMA network (Gray, Paragraph 0026 discloses TDMA).

140. As for Claim 30, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a CDMA network (Gray, Paragraph 0026 discloses CDMA).

141. As for Claim 31, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a OFDM network (Gray, Paragraph 0019 discloses OFDM).

142. As for Claim 45, Murakami in view of Olnowich discloses the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path).

143. Murakami in view of Olnowich do not expressly disclose is a cellular network.

144. Gray discloses in the same field of endeavor is a cellular network (Paragraph 0003).

145. Gray discloses this difference for the purpose of enabling the WAN user to access and utilize the desired WLAN bandwidth from a high speed WLAN-based network to efficiently and quickly transmit, receive, upload or download files (Paragraph 0008).

146. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined apparatus of Murakami and Olnowich and add to it the feature as disclosed above by Gray to create an apparatus for transmitting information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

147. As for Claim 47, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an ultra-wide bandwidth wireless network (Gray, Paragraph 0003 discloses a wireless telecommunications network).

148. As for Claim 48, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an indoor wireless network (Gray, Paragraph 0007 discloses wireless local area network, WLAN).

149. As for Claim 49, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a TDMA network (Gray, Paragraph 0026 discloses TDMA).

150. As for Claim 50, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a CDMA network (Gray, Paragraph 0026 discloses CDMA).

151. As for Claim 51, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a OFDM network (Gray, Paragraph 0019 discloses OFDM).

152. As for Claim 61, Murakami in view of Olnowich discloses the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path).

153. Murakami in view of Olnowich do not expressly disclose is a cellular network.

154. Gray discloses in the same field of endeavor is a cellular network (Paragraph 0003).

155. Gray discloses this difference for the purpose of enabling the WAN user to access and utilize the desired WLAN bandwidth from a high speed WLAN-based network to efficiently and quickly transmit, receive, upload or download files (Paragraph 0008).

156. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined apparatus of Murakami and Olnowich and add to it the feature as disclosed above by Gray to create an apparatus for receiving information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

157. As for Claim 63, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an ultra-wide bandwidth wireless network (Gray, Paragraph 0003 discloses a wireless telecommunications network).

158. As for Claim 64, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an indoor wireless network (Gray, Paragraph 0007 discloses wireless local area network, WLAN).

159. As for Claim 65, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a TDMA network (Gray, Paragraph 0026 discloses TDMA).

160. As for Claim 66, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a CDMA network (Gray, Paragraph 0026 discloses CDMA).

161. As for Claim 67, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a OFDM network (Gray, Paragraph 0019 discloses OFDM).

162. As for Claim 77, Murakami in view of Olnowich discloses the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path).

163. Murakami in view of Olnowich do not expressly disclose is a cellular network.

164. Gray discloses in the same field of endeavor is a cellular network (Paragraph 0003).

165. Gray discloses this difference for the purpose of enabling the WAN user to access and utilize the desired WLAN bandwidth from a high speed WLAN-based network to efficiently and quickly transmit, receive, upload or download files (Paragraph 0008).

166. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined system of Murakami and Olnowich and add to it the feature as disclosed above by Gray to create a system for transmitting and receiving information over a transmission medium providing a technique for efficiently and cost effectively communicating data over a wireless link between Ethernet local area networks.

167. As for Claim 79, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an ultra-wide bandwidth wireless network (Gray, Paragraph 0003 discloses a wireless telecommunications network).

168. As for Claim 80, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is an indoor wireless network (Gray, Paragraph 0007 discloses wireless local area network, WLAN).

169. As for Claim 81, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a TDMA network (Gray, Paragraph 0026 discloses TDMA).

170. As for Claim 82, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a CDMA network (Gray, Paragraph 0026 discloses CDMA).

171. As for Claim 83, Murakami in view of Olnowich further in view of Gray disclose the transmission medium (Murakami, Column 1, Lines 7-14 discloses a transmission path) is a OFDM network (Gray, Paragraph 0019 discloses OFDM).

Conclusion

172. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Document	Inventors	Publication Date
5,844,907	Uchiki et al	December 1, 1998

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT ROOT whose telephone number is 571-270-1960. The examiner can normally be reached on Monday to Friday from 7:30am to 5:00pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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